

**REMARKS**

Claims 1, 3-15, 17-24, 26-39, 41 and 43 are pending. Applicant made an election on March 24, 2005, without traverse, of Group I, claims 1-13, 15-17, 24-26, 36-37 and 39-43. Claims 14, 18-23 and 27-35 are withdrawn from consideration. Claims 1, 10, 11, 15, 24, 36, 37, 39, 41 and 43 have been amended. Claims 2, 16, 25, 40 and 42 have been cancelled.

The Office Action objects to the drawings under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. The Office Action requires a corrected drawing sheet showing the integrated circuit with claimed limitations as claimed in independent claim 43.

Applicant respectfully submits that all limitations of claim 43 are present in the drawings as originally filed. For example, referring to Paragraph 24 of the specification: "Figure 4 illustrates a system that is functionally similar to that of Figure 3, but that differs from the system of Figure 3 in that the controlled power supply 100, including control circuit 104 and charge pump power supply 108 are entirely implemented on the integrated circuit 210 bearing the flash memory array 118." While the figure and its accompanying description are not limiting, the limitations of independent claims 43 are fully illustrated in Figure 4 and elsewhere.

The Office Action similarly objects to the specification because the "integrated circuit with claimed limitations as claimed in independent claim 43 is not supported in [the] specification[]." Again, Applicant respectfully submits that the specification provides adequate support for the limitations of claim 43 in Paragraph 24 and elsewhere.

Claims 1-13, 15-17, 24-26, 36 and 39-43 stand rejected under 25 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,404,274 to Hosano. This rejection is respectfully traversed.

Amended independent claim 1 recites, *inter alia*, a method of controlling a power supply comprising “reading a digital signal on a digital data bus, said digital signal including information relating to an anticipated change in power demand; generating a control signal” and “modifying a power output of said power supply to a load in response to said control signal, wherein said act of modifying said power output further comprises activating more than one of [a] plurality of charge pump circuits responsive to said control signal.”

Hosano does not disclose these limitations. Specifically, Hosano does not disclose “activating more than one of [a] plurality of charge pump circuits responsive to said control signal.” The Office Action identifies elements 681, 682 and 693 as a plurality of charge pump circuits, but these circuits operate independently depending on the operation being performed and are not activated simultaneously based on, for example, an increase in power demand. For these and other reasons, the rejection of claim 1 should be withdrawn and the claim should be allowed. Claims 3-6 depend from amended claim 1 and should be allowed for at least the same reasons.

Amended independent claim 15 recites, *inter alia*, a method of controlling a power supply comprising “setting an output of said power supply to a particular level in response to said analog signal, wherein said power supply comprises a plurality of subcircuits and said setting an output of a power supply comprises activating more than one of said subcircuits.”

Hosano does not disclose these limitations, specifically “a plurality of subcircuits” and “setting an output of a power supply [by] *activating more than one of*

said subcircuits. For these and other reasons, the rejection of claim 15 should be withdrawn and the claim should be allowed. Claim 17 depends from amended claim 15 and should be allowed for at least the same reasons.

Amended independent claim 24 recites, *inter alia*, a method of controlling a power supply comprising “sensing a number of bits in a particular logic state in a particular digital communication; and adapting said power supply to supply a particular level of current, said level of current being proportional to said number of bits by switchingly connecting a plurality of power supply portions to a load circuit.”

Hosano does not disclose these limitations, specifically “adapting said power supply to supply a particular level of current, said level of current being proportional to [a] number of bits by *switchingly connecting a plurality of power supply portions* to a load circuit.” For these and other reasons, the rejection of claim 24 should be withdrawn and the claim should be allowed. Claim 26 depends from amended claim 24 and should be allowed for at least the same reasons.

Amended independent claim 36 recites, *inter alia*, a power supply apparatus comprising a “control circuit adapted to activate more than one of [a] plurality of charge pump circuits in response to a signal on [a] data input.”

Hosano does not disclose these limitations, specifically a “control circuit adapted to *activate more than one* of [a] plurality of charge pump circuits in response to a signal on [a] data input.” For these and other reasons, the rejection of claim 36 should be withdrawn and the claim should be allowed.

Amended independent claim 39 recites, *inter alia*, a power supply controller comprising “a sensing circuit adapted to activate one or more of [a] plurality of outputs in response to a corresponding pattern of data bus signals detected on [a] plurality of

data bus inputs and a plurality of charge pump circuits connected to one of said plurality of outputs.”

Hosano does not disclose these limitations, specifically, “a *plurality of charge pump circuits* connected to *one* of said plurality of outputs.” For these and other reasons, the rejection of claim 39 should be withdrawn and the claim should be allowed.

Amended independent claim 41 recites, *inter alia*, a processing system comprising “a sensing circuit adapted to activate more than one of [a] plurality of outputs in response to a pattern of data bus signals detected on [a] plurality of data bus inputs and a plurality of charge pump circuits each operatively connected to a respective output.”

Hosano does not disclose these limitations, specifically, “a sensing circuit adapted to *activate more than one* of [a] plurality of outputs in response to a pattern of data bus signals.” For these and other reasons, the rejection of claim 41 should be withdrawn and the claim should be allowed.

Amended independent claim 43 recites, *inter alia*, a microprocessor integrated circuit comprising “a sensing circuit adapted to activate or deactivate [an] output in response to a corresponding pattern of data bus signals detected on [a] plurality of data bus inputs; and a plurality of charge pump circuits responsive to said output, said output activating more than one of said plurality of charge pump circuits responsive to said sensing circuit.”

As discussed above, Hosano does not disclose these limitations, specifically, “a plurality of charge pump circuits responsive to said output, said output being capable of *activating more than one* of said plurality of charge pump circuits responsive

to said sensing circuit.” For these and other reasons, the rejection of claim 43 should be withdrawn and the claim should be allowed.

Claims 39-43 stand rejected under 25 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,421,297 to Huber. This rejection is respectfully traversed.

With respect to claim 39, discussed above with respect to Hosano, Hubard also does not disclose “a sensing circuit adapted to activate one or more of [a] plurality of outputs in response to a corresponding pattern of data bus signals detected on [a] plurality of data bus inputs and a plurality of charge pump circuit connected to one of said plurality of outputs.” For these and other reasons, the rejection of claim 39 should be withdrawn and the claim should be allowed.

With respect to claim 41, discussed above with respect to Hosano, Hubard also does not disclose “a sensing circuit adapted to activate more than one of [a] plurality of outputs in response to a pattern of data bus signals detected on [a] plurality of data bus inputs and a plurality of charge pump circuits each operatively connected to a respective output.” For these and other reasons, the rejection of claim 41 should be withdrawn and the claim should be allowed.

With respect to claim 43, discussed above with respect to Hosano, Hubard also does not disclose “a sensing circuit adapted to activate or deactivate [an] output in response to a corresponding pattern of data bus signals detected on [a] plurality of data bus inputs; and a plurality of charge pump circuits responsive to said output, said output being capable of activating more than one of said plurality of charge pump circuits responsive to said sensing circuit.” For these and other reasons, the rejection of claim 43 should be withdrawn and the claim should be allowed.

Claims 37 stands rejected under 25 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,653,888 to Lee. This rejection is respectfully traversed.

Amended claim 37 recites, inter alia, a power supply apparatus comprising "a plurality of groups of outputs of said control circuit, each group of outputs being operatively connected to a respective charge pump circuit, said outputs being adapted to transmit said plurality of output signals to said plurality of charge pumps by their respective groups, whereby said plurality of charge pumps are each activated or deactivated in response to said respective plurality of groups of output signals."

Lee does not disclose these limitations. Specifically, Lee does not disclose "a plurality of groups of outputs of said control circuit, each group of outputs being operatively connected to a respective charge pump circuit." For these and other reasons, the rejection of claim 37 should be withdrawn and the claim should be allowed.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: July 11, 2005

Respectfully submitted,

By 

Thomas J. D'Amico

Registration No.: 28,371

Jerome A. DeLuca

Registration No.: 55,106

DICKSTEIN SHAPIRO MORIN &  
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorney for Applicant